DOCUMENT RESUME

ED 147 450 CE 011 613

TITLE	Data-Based Locally Directed Evaluation of Vocational Education Programs. Component 4. Facilities and Equipment Evaluation.
INSTITUTION	Florida State Univ., Tallahassee. Program of Vocational Education.
SPONS AGENCY	Florida State Dept. of Education, Tallahassee. Div. of Vocational Education.
BUREAU NO	C7-002
PUB DATE	Jul 77
NOTE	35p.; For related documents see CE 011 608-617
EDRS PRICE	MF-$0.83 HC-$2.06 Plus Postage.
DESCRIPTORS	Administrator Guides; County School Systems; Educational Equipment; Educational Facilities; *Equipment Evaluation; *Evaluation Methods; Facility Inventory; Guidelines; Post Secondary Education; *Program Evaluation; *School Districts; Secondary Education; State Programs; Summative Evaluation; *Vocational Education
IDENTIFIERS	Florida

ABSTRACT

Part of a system by which local education agency (LEA) personnel may evaluate secondary and postsecondary vocational education programs, this fourth of eight components focuses on evaluation of facilities and equipment. Procedures are suggested by which the local evaluation team, cooperating with a staff steering committee and a citizen's advisory committee, systematically evaluates existing facilities and equipment, analyzes findings, and makes recommendations concerning the adequacy of facilities and equipment relative to state standards. Sample evaluation instruments are included for inventory of physical resources and the observation and rating of facilities and equipment characteristics. A glossary is appended. (Each of the other seven components and an overview guide, CE 011 609, are available separately.) (JT)

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COMPONENT 4

FACILITIES AND EQUIPMENT EVALUATION

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DATA-BASED LOCALLY DIRECTED EVALUATION

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DATA-BASED LOCALLY DIRECTED EVALUATION OF VOCATIONAL EDUCATION PROGRAMS

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July 1977

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Component Four

FACILITIES AND EQUIPMENT EVALUATION

I. Overview

The delivery of modern vocational education training programs requires specialized physical facilities, buildings, classrooms, laboratories, and equipment. Therefore, the types of educational equipment and facilities required to deliver quality vocational education training programs are much more complex today than ever before. Consequently, the ability of the local education agency to meet instructional objectives depends proportionately upon the adequacy of its facilities and equipment.

The purpose of facilities and equipment evaluation is to determine the adequacy of existing equipment, service facilities, and instructional facilities in meeting the educational or instructional objectives of the institution. An additional purpose is to help prepare for state directed vocational education instructional program review. Conscientious local evaluation may reveal discrepancies which detract from, or inhibit program efficiency and effectiveness. Recommendations generated from the evaluation should contribute significantly to improving vocational instruction.

II. Suggested Procedures

Prior to conducting a facilities and equipment evaluation, the LEA may wish to call a meeting of the general or craft advisory committee to discuss the rationale for the evaluation. In this case, items for discussion may include:

1. Unsafe facilities and equipment.
2. Antiquated facilities and equipment.
3. Insufficient space allocation.
4. Program changes.
5. Reports from previous facilities and equipment evaluation.
6. Suggested or recommended evaluative steps.

In addition to discussing items such as these, the committee may wish to write facilities and equipment evaluation objectives which emphasize safety and overall instructional improvement.

Evaluation Questions

To conduct a facilities and equipment evaluation, the LEA should answer the following questions in order to establish criteria for evaluation.

1. What are the institutional and programmatic goals?
2. What facilities and equipment safety standards should be met to comply with safety legislation as well as provide comfort and convenience for students, faculty, and administration?

3. What facilities and equipment are needed to meet these goals?
4. What facilities and equipment are currently available, and what is the condition of the facilities and equipment?

These evaluation criteria can be applied best by organizing a step-by-step evaluation process that permits individuals involved instructional program to contribute. Instructional personnel can help in determining facilities and equipment needed as well as any discrepancy between the current level of facilities and the optimum level.

Evaluation Steps

The coordinator of evaluation working with the citizens committee and instructional and administrative personnel may develop a step-by-step evaluation plan similar to that given below.

1. Formulate institutional and program objectives.
2. Select a team to design and conduct the evaluation.
3. Identify and select areas to be evaluated.
4. Compile a list of evaluation questions which can determine the safety, utility, and adequacy of facilities and equipment.
5. Conduct the evaluation.
6. Analyze and summarize the evaluation results.
7. Recommend corrective action if needed.

Formulate institutional and program objectives. In most instances, the local education agencies will have published a listing of institutional and program goals and objectives, which include both short-range (1-2 years) and long-range (5 years or more) goals and objectives. To formulate a working list of institutional and program objectives, the LEA need only have copies of these made for use in conducting the evaluation. The evaluation team can then review the goals and objectives to establish the initial phases of the evaluation. In the absence of a current listing of institutional and program goals and objectives, the LEA should consider updating its goals and objectives, or drawing up a new list.

Select a team to design and coordinate the evaluation. The selection of a team to design and conduct the evaluation effort requires considerable thought. Persons selected should be representative of the various segments of the institution and the community (i.e., faculty, administration, students, and community representatives). In addition, a portion of the evaluation team should possess the technical expertise to make value judgments regarding structural and environmental safety. Other members of the team should be selected on their knowledge of space allocation and utilization, obsolescence of instructional equipment, and resource allocation.

Administrators and instructors in specific training programs should be able to identify persons who have the technical expertise and training necessary to evaluate safety conditions within their respective disciplines. If not, the regional vocational program area consultant(s) of the Florida Department of Education, Division of Vocational Education can help in identifying such persons. In cases where the technical expertise is not available within the LEA to assess structural and environmental safety, the LEA should consider the use of consultants from outside the agency to help identify unsafe conditions and equipment and recommend corrective action.

Determine areas to be evaluated. The evaluation team should determine whether instructional equipment is obsolete and whether such equipment is adequate to meet the training needs of students and potential employers. In addition, the LEA should identify specific areas (e.g., physical plant, building services, and health and safety) to be included in the facilities and equipment evaluation. The focus of the evaluation may range from traffic safety, noise level, and ventilation requirements to external and internal structures, lighting, heating, electrical and mechanical safety, and classroom size and student and equipment loadings per unit area of floor space. A sample check sheet to aid in the identification of areas and items which should be included in the evaluation is provided in Appendix A. Items and

areas which should be evaluated may be identified by simply checking off the items shown on the check sheet provided in Appendix A or a similar check sheet developed by the LEA.

Compiling a list of evaluation questions. The evaluation team should compile a list of evaluative questions concerning the adequacy, safety, and use of facilities and equipment in delivering quality instruction to students. The questions should be written so that the answers will be of assistance in the improvement of instruction. The list of evaluative questions can be formulated into a facilities and equipment evaluation questionnaire. (A sample evaluation questionnaire is shown in Appendix B). Such a questionnaire can be comprehensive or simple depending upon the objectives and activities of the occupational insturctional programs.

The sample questionnaire shown in Appendix B is representative of a more comprehensive type of facilities and equipment evaluation instrument, and may be altered depending upon the LEA requirements.

Conduct of the evaluation. LEAs which have adequate financial resources may have a full-time facilities and equipment safety coordinator whose prime responsibility is to administer the day-to-day activities relating to the evaluation. Facilities and equipment evaluation is one component of the data-based locally directed evaluation

package which can help assure safety compliance, instructional improvement, and equipment and instructional compatability.

For those LEAs which are able to employ a coordinator of safety, the facilities and equipment evaluation may be a simple review of the records, procedures, etc. In such case, the evaluative recommendations may be a simple updating of current evaluation practices and procedures.

In the absence of a full-time coordinator of safety, the LEA will likely need to conduct a complete facilities and equipment evaluation. The completion of the evaluation may require that on-site visual inspections be made. These inspections by the LEA (or evaluation team) should be guided by questionnaires (such as the one provided in Appendix B) which should be completed during the visitation.

Evaluation summary and analysis. Upon completion of the facilities and equipment evaluation, the evaluation team should summarize and analyze the results of the evaluation. This summary will provide a data base to determine discrepancies between existing facilities and equipment and optimum conditions. One method appropriate for an evaluation summary is construction of an evaluation summary form (an example is shown in Appendix C). An evaluation summary form is helpful in making a quick-reference determination of whether state and federal safety compliances are being

met, and whether the general conditions of facilities and equipment are adequate to meet program and institutional objectives. The evaluation summary may also be used to identify equipment which may have become outdated or obsolete. In addition, the evaluation summary may be helpful in determining specific corrective actions which the LEA may consider appropriate. The evaluation summary presents and overview of the total evaluation and points to specific areas where recommendations regarding safety and adequacy of facilities and equipment may be required.

The evaluation summary makes rating facilities and equipment adequacy in meeting instructional needs simpler. Each item may be rated by the evaluatior team into an "adequate" or "not adequate" category. (Appendix C).

Recommendations and follow-up evaluation. As noted in the evaluation summary and analysis section, recommendations regarding the adequacy and safety of facilities and equipment may be made. Such recommendations may include suggested steps to correct deficiencies in the safety and adequacy of facilities and equipment.

A follow-up evaluation to determine progress toward correcting deficiencies should be conducted by the LEA within six months after the initial evaluation has taken place. A simple follow-up evaluation form is provided in Appendix B. The follow-up evaluation permits corrective actions to be recorded which relate to specific suggestions and

recommendations made in the initial evaluation. In some instances, recommended corrective actions may not have been completed. In these cases progress toward completion of recommendations should be recorded.

Discrepancies

Data compiled through the facilities and equipment evaluation allows the LEA to answer the questions posed at the outset:

1. What are institutional and programmatic goals?
2. What facilities and equipment are needed to meet these goals?
3. What facility and equipment safety standards should be met to comply with safety legislation as well as provide comfort and convenience for students, faculty, and administration?
4. What facilities and equipment are currently available, and what is its condition?

In order to conduct the discrepancy analysis between "what should be" and "what is" in facilities and equipment, the LEA should obtain a copy of the statewide facilities and equipment standards titled, "Prototype Design Criteria" from the Division of Vocational Education. Tool and equipment standards may be available from the various programs' regional consultants.

The statewide facilities and equipment standards

should be reviewed in the light of occupations for which LEAs are provided training. Items in the state facilities and equipment standards which are not required for specific programs should be deleted. It should be noted, however, that LEAs should have good and equitable reasons for deleting any items on the statewide standards. When a comparison of existing facilities and equipment is made against the revised list of state standards, a discrepancy analysis may be included as part of the evaluation summary and analysis section given previously. A space for recording discrepancies is provided on the evaluation summary form Appendix C. The discrepancy analysis can provide recommendations for program improvement. Actions taken in response to suggestions and recommendations can be recorded for permanent retention on the form shown in Appendix E. When the Staff Action Coordination Sheet is used, the reviewer should include comments as to the adequacy of the action taken.

III. Using Evaluation Data

The use of the results of facilities and equipment evaluation by instructors and administrators is essential to delivering quality vocational education to students. Evaluative survey data permits the LEA to make a critical analysis of problem areas, and can help the LEA determine corrective action. The effectiveness of evaluation depends on the validity of recommendations and their implementation.

The results of facilities and equipment evaluation can help the LEA deliver efficient and effective vocational educational training experiences. Such evaluation can increase public awareness of educational objectives and offerings, and improve the understanding of the functions of facilities and equipment.

IV. Summary

This component of the locally directed evaluation effort featured facilities and equipment evaluation. The purpose of such evaluation is to assess the adequacy of facilities and equipment in meeting the educational and instructional objectives of the LEA. Use of facilities and equipment by the LEA is an integral part of the total educational process of the institution, therefore, a continuous evaluative effort aimed at the safety and adequacy of these resources is essential in determining whether the LEA is meeting institutional goals and community needs.

Detailed List of Tasks Required to Conduct Evaluation

The following breakdown of suggested evaluation procedures are given to provide the LEA with a quick-reference list of items which should be included in the facilities and equipment evaluation:

1.0 Establish institutional and program objectives.

- 1.1 Compile a list of institutional and program objectives.
  - 1.1.1 Distribute list of institutional and program objectives to evaluation team.
  - 1.1.2 Review institutional and program objectives in light of facilities and equipment evaluation.

2.0 Select a team to design and coordinate the evaluation.

2.1 Select faculty, administrators, and community representatives.

2.1.1 Select persons with expertise to address evaluative questions.

2.2 Select a team of consultants.

2.2.1 Consult regional vocational program consultants.

3.0 Identify items to be evaluated.

3.1 Check items to be evaluated on checksheet provided.

3.2 Construct checksheet of items to be evaluated.

4.0 Conduct evaluation.

4.1 Review existing records and procedures.

4.2 Compile a list of evaluation questions.

4.3 Conduct visual inspections.

4.3.1 Check adequacy of facilities and equipment on evaluation instrument.

5.0 Analyze and summarize evaluation.

5.1 Determine discrepancies.

5.1.1 Indicate discrepancies between optimum facilities and equipment and those existing.

5.2 Recommend corrective action.

6.0 Conduct follow-up evaluation.

6.1 Record progress toward alleviating discrepancies found in initial evaluation.

V. Sample Evaluation Materials

	Appendix
Check Sheet for Identifying Areas and Items to be Evaluated	A
Sample Questionnaire for Evaluating Facilities and Equipment	B
Sample Facilities and Equipment Evaluation Summary Sheet	C
Facilities and Equipment Evaluation Summary Sheet	D
Staff Action Coordination Sheet	E

APPENDIX A

CHECK SHEET FOR IDENTIFYING AREAS

AND ITEMS TO BE EVALUATED

Instructions: In the space provided, check those areas and items that are considered essential to the local evaluation.

A. Physical Facilities

__Location
__Size
__Activity Areas
__Expandability
__Noise
__Appearance
__Student Safety
__Adequate Working Areas
__External Structures
__Internal Structures
__Classrooms
__Traffic

B. Building Services:

__Space for Offices
__Electrical
__Fire Protection
__Lockers
__Class Supplies
__Water Supply
__Restrooms
__Plumbing

C. Health and Safety:

__Lighting
__Ventilation-Safety and Temperature
__Heating
__Cleanliness
__Restrooms
__Acoustics
__Occupational Health and Environmental Control
__Medical and First Aid

APPENDIX A-2

D. Equipment and Tools:

__Meets OSHA Standards

__Storage Areas

__Space Allocation

__Location-Accessability

__Quantity

__Operating Conditions

__Replacement Schedule

__Cleanliness

__Current with Industrial Equipment

__Meets Occupational and Regulatory Standards

E. Classroom Facilities:

__Agriculture

__Business

__Distributive Education

__Health and Education

__Handicapped

__Home Economics

__Technical and Industrial

__Public Service

__Cooperative Programs

__Others

F. Other Facilities and Equipment:

APPENDIX B

SAMPLE QUESTIONNAIRE FOR EVALUATING FACILITIES AND EQUIPMENT

Directions: Rate the following items yes or no.
Check N/A if the item is not applicable.
Please write in suggestions and possible
to questions that pose a problem.

	N/A	Yes	NO
A. Is instructional equipment provided and utilized to meet the objectives of the program and is it fully operational?			
Assessment criteria:			
1. The type, variety and quantity of tools and equipment are adequate and available to meet the instructional objectives			
Comment:_____			
2. Instructional equipment is operable and utilized to attain instructional objectives.			
Comment:_____			
3. Periodic preventive maintenance is performed.			
Comment:_____			
4. Equipment is replaced according to a prescribed schedule.			
Comment:_____			

APPENDIX B-2

	N/A	Yes	No
B. Are adequate laboratory (shop) facilities provided?			
Assessment criteria:			
1. There is a laboratory provided for each instructional category (e.g. carpentry, metal work, mechanics, etc.)			
Comment:_____			
2. The laboratory is large enough and adequately equipped to facilitate learning.			
Comment:_____			
3. Laboratory noises disturb school activities.			
Comment:_____			
4. Laboratories are accessible for evening classes.			
Comment:_____			
5. Laboratories that must be accessible to automobiles have adequate entrances and exits to driveways.			
Comment:_____			
6. Heavy equipment laboratories are located on the ground floor.			
Comment:_____			

	N/A	Yes	No
7. Shops that create fumes are placed so that prevailing wind will carry away the noxious odors from the buildings.			
C. Are ventilating and heating facilities adequately installed and maintained to assure the health and safety of students, faculty, and visitors?			
Assessment criteria:			
1. The heating and ventilation system maintains comfortable and healthful conditions. Comment:_____			
2. The ventilating system provides fresh outdoor air constantly and keeps it gently in motion. Comment:_____			
3. Dust, smoke, odors, fumes, vapors, and gases are filtered and exhausted by properly installed mechanical means. Comment:_____			
4. The heating system maintains a comfortable temperature -measured 30 inches above the floor. Comment:_____			

APPENDIX B-4

D. Are classrooms adequate to meet instructional objectives?	N/A	Yes	No
Assessment of criteria:			
1. Adequate electrical outlets are conveniently located.			
Comment:_____			
2. Space is provided for group and independent study.			
Comment:_____			
3. Size and arrangement of instructional areas are flexible for a variety of learning activities.			
Comment:_____			
4. Classroom size is sufficient.			
Comment:_____			
5. Heating, cooling, and ventilation systems are adequate.			
Comment:_____			
6. Fire extinguishers are accessible and personnel are trained to use them.			
Comment:_____			
7. Furniture and equipment are adequate for classroom operations. (check those available)			
___Display Cases			

	N/A	Yes	No
__Work Surfaces			
__Writing Areas			
__Instructional Media			
__Storage			
__Shelving			
__Seating			
__Other (specify)			
Comment:_____			
E. Is health and safety being adequately considered?			
Assessment criteria:			
1. Student traffic is safe.			
2. Material traffic is safe.			
3. Shape and/or size of room is adequate to facilitate instructional and activity needs.			
4. School site area is consistent with pupil safety for outdoor education.			
5. There is room for expansion of the building to provide for additional facilities due to enrollment increases and expanded services.			
6. Work areas are shielded from noise.			
7. Size of school site is adequate.			
8. Location of school site is appropriate.			

APPENDIX B-6

		N/A	Yes	No
9.	School site has good appearance.			
10.	Accessibility of school entrances approached by automobile is adequate.			
11.	Student safety when entering and leaving the building is stressed and practiced.			
12.	Provisions for natural ventilation are provided.			
13.	Interior is designed for comfort and health of occupants.			
14.	Chemicals and flamable materials are stored properly.			
15.	Consumable materials (lumber, metals, etc.,) are stored properly.			
16.	Electrical equipment is properly grounded.			
17.	Facilities for the handicapped are provided.			
18.	Machinery (movable parts) are stored properly.			
19.	Working space for teachers is available.			
20.	Working space for counselors is available.			

APPENDIX B-7

	N/A	Yes	No
21. Adequate administrative offices are available.			
22. Internal structures - stairs, corridors, lobbies, etc., are not cluttered and are constructed according to safety codes.			
23. Lavatories for students, staff, faculty, etc., are appropriately located.			
24. External structures - roof, walls, entrances, etc., are free from clutter and are constructed according to established codes.			

APPENDIX C

SAMPLE FACILITIES AND EQUIPMENT EVALUATION SUMMARY SHEET

Instructional Program:_____

Facilities and Equipment Needed to meet Instructional Objectives (State Standards adapted to local needs)	Existing Facilities and Equipment (Includes condition of specific item)	Discrepancy	Recommendations
Example: 150 sq. ft. per student is available	Laboratory space required is 200 sq. ft. per student	50 sq. ft. per student	Consideration should be given to adding more space, particularly if enrollment increases. However, discrepancy does not warrant corrective action at this time.

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APPENDIX D

FACILITIES AND EQUIPMENT EVALUATION SUMMARY SHEET

Instructional Program: _____

Optimum Facilities and Equipment to Meet Instructional Objectives (State Standards adapted to local needs)	Existing Facilities and Equipment (Includes condition of specific item)	Discrepancy	Recommendations

APPENDIX E

STAFF ACTION COORDINATION SHEET
(Facilities and Equipment Evaluation)

Program: _____

Date: _____

Recommendations and Suggestions Resulting from Initial Evaluation	Action taken on Suggestions and Recommendations	Comments	Dept.

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Glossary

Discrepancy: a difference between established standards of "what should be," the ideal, and "what is," the real.

Discrepancy Analysis: the process of comparing the data collected on "what is" with the standards established by the local education agency personnel or the local evaluation team.

LEA (Local Education Agency): the local school district, the local community college district, or other institutions with educational responsibilities.

OSHA: the Federal Occupational Safety and Health Act of 1970.

State Instructional Program Review: joint evaluation of individual vocational education programs by local instructors, administrators and Department of Education Regional Program Consultants.